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MONOGRAPHS ON EDUCATION

IN THE

UNITED STATES

EDITED BY
NICHOLAS MURRAY BUTLER
President of Columbia University in the City of New York

4

SECONDARY EDUCATION

BY
ELMER ELLSWORTH BROWN
Professor of Education in the University of California

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DEPARTMENT OF EDUCATION

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Chief of Department

HOWARD J. ROGERS, Albany, N. Y.

MONOGRAPHS

ON

EDUCATION IN THE UNITED STATES

EDITED BY

NICHOLAS MURRAY BUTLER

President of Columbia University in the City of New York

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2 KINDERGARTEN EDUCATION — SUSAN E. BLOW, *Cazenovia, New York*

3 ELEMENTARY EDUCATION — WILLIAM T. HARRIS, *United States Commissioner of Education, Washington, D. C.*

4 SECONDARY EDUCATION — ELMER ELLSWORTH BROWN, *Professor of Education in the University of California, Berkeley, California*

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6 THE AMERICAN UNIVERSITY — EDWARD DELAVAN PERRY, *Jay Professor of Greek in Columbia University, New York*

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SECONDARY EDUCATION

One could not expect to find distinctively American institutions among the colonists of the seventeenth century. There was as yet no distinctively American character. Two opposing influences were at work shaping the colonial life: the first was the spirit of protest against European institutions, which many of the colonists had brought with them from the Old World; the second was the ever-present instinct of imitation. Real American schools might be expected to develop with the development of real American nationality. In the beginning, there could be only such schools as might arise under the mingled influence of a desire to be like the mother-country and a desire to be different.

We find, as a matter of fact, the history of American secondary education presenting three pretty well-defined types and stages of development. There is, first, the colonial period, with its Latin grammar schools; secondly, the period extending from the revolutionary war to the middle of the nineteenth century, during which the attempt was made to solve the problem of American secondary education by means of the so-called academy; and, thirdly, the succeeding period down to the present time, chiefly characterized by the upgrowth of public high schools.

The specific influences which most vitally influenced the early development of secondary education in America were, on the one hand, the example of the "grammar schools" of old England; and, on the other hand, the rising spirit of democracy, in large measure Calvinistic as to its modes of thought, and in touch with movements in the Calvinistic portions of Europe.

THE BEGINNINGS

Early in the history of the colony of Virginia, funds were raised and lands set apart for the endowment of a Latin grammar school. But these promising beginnings were swept away by the Indian massacre of 1622, and the school seems never to have been opened. The town of Boston, in the Massachusetts Bay colony, set up a Latin school in 1635, which has had a continuous existence down to the present time. This school was established by vote of the citizens in a town meeting. It was supported in part by private donations, and in part by the rent of certain islands in the harbor, designated by the town for that purpose. A town rate seems also to have been levied when necessary to make up a salary of £50 a year for the master.

Other Massachusetts towns soon followed the example of Boston. The money for the support of these schools was obtained in a variety of ways. School fees were commonly but not universally collected. A town rate, which was depended upon at first only to supplement other sources of revenue, gradually came to be the main reliance; and by the middle of the eighteenth century the most of the grammar schools of Massachusetts charged no fee for tuition.

Latin schools were early established in the colonies included in the territory of the present state of Connecticut: one at New Haven in 1641, and one at Hartford not later than 1642. A notable bequest left by Edward Hopkins, sometime governor of Connecticut colony, whose later years were passed in England, became available soon after the middle of the seventeenth century. The greater part of it was devoted to the maintenance of Latin grammar schools in Hartford and New Haven, and also in the towns of Hadley and Cambridge in Massachusetts.

The Dutch at New Amsterdam — now New York — opened a Latin school in 1659. This school was continued for some years after the colony passed under English rule. Secondary schools were established in the colony of Penn-

sylvania in the latter part of the seventeenth century. One of these, the William Penn Charter School, at Philadelphia, has continued down to the present day. King William's school, at Annapolis, was erected by the legislature of Maryland in 1696. Similar schools were from time to time established in different sections of the same colony. The eighteenth century saw schools of like character opened, partly by legislative enactment, partly by private initiative, in these and in the remaining colonies. Some of the number, like the University Grammar School in Rhode Island and the Free School at New York, were either the forerunners or the accompaniments of colonial colleges.

Not only were these several schools opened during the colonial period: important beginnings were made also in the organization of colonial systems of secondary education. The Puritan colony of Massachusetts took the lead in this movement. In 1647 the colonial legislature decreed that an elementary school should be maintained in every town having a population of fifty families; and that in every town having one hundred families there should be a grammar school, in which the students might be fitted for admission to the university.

This liberal provision was soon copied by the neighboring colonies of Connecticut and New Hampshire. In Connecticut the provision was afterwards changed to a requirement of a grammar school in each county town. These New England colonies maintained and enforced such provisions regarding grammar schools, with varying degrees of strictness, to be sure, down to and even after the revolutionary war. Maryland established by law a system of county grammar schools, thus keeping pace with the more northern colony of Connecticut.

The interest in secondary education declined and many schools fell into decay as the revolutionary period approached. When the colonies were transformed into states, after the declaration of independence, the four systems of schools mentioned above were continued with little

change. No other of the thirteen states had anything that could be called a system of public instruction.

COLONIAL SCHOOLS

The chief emphasis in these schools was laid on the preparation of future collegians to pass the college entrance examination. The most of the schools were in this sense "preparatory" or "fitting" schools. The requirements for admission to college determined their course of study. In the middle of the seventeenth century, the requirements of Harvard college, which fixed the scholastic standard for New England, are stated as follows: "When scholars had so far profited at the grammar schools that they could read any classical author into English, and readily make and speak true Latin, and write it in verse as well as prose; and perfectly decline the paradigms of nouns and verbs in the Greek tongue, they were judged capable of admission in Harvard college." A century later, the requirements of Princeton college, which profoundly influenced the secondary schools of the middle states, were described in these words: "Candidates for admission into the lowest or freshman class must be capable of composing grammatical Latin, translating Virgil, Cicero's Orations, and the four Evangelists in Greek; and by a late order * * * must understand the principal rules of vulgar arithmetic."

The colonial grammar schools taught accordingly Latin, and a little Greek. They gave instruction in religion; but little else was added to the classical languages.

Social grades were pretty sharply distinguished in the colonies. The grammar schools and colleges were intended especially for the directive and professional classes. They had little if any connection with such elementary schools as there were. In Massachusetts, towns which maintained grammar schools were not required to maintain reading schools. Sometimes pupils were taught to read in grammar schools. But the grammar school teachers objected to this burden; and the mixing of the two grades of instruction in

one school was recognized as an evil. There seems to have been no middle grade of school, answering to the needs of a middle class in society. And for girls there was no provision whatever beyond occasional instruction in the merest rudiments of learning.

In the colleges, the ecclesiastical spirit and purpose was paramount. The students were for the most part preparing for the clerical vocation in some one of the Protestant denominations. But naturally only a part of the students in the grammar schools showed the disposition and the aptitude to pursue classical studies and enter the profession to which they led. The grammar schools exercised a kind of selective function, discovering latent capacity for the higher studies and starting talented youth on the way to college. Those who showed capacity of a lower grade or of a different sort seem to have received but little attention or encouragement in the schools of that day.

A TIME OF TRANSITION

As we approach the revolutionary period, we find new social conditions giving rise to a new order of schools. In the earlier days there had been, in most of the colonies, a close connection between ecclesiastical and political functions. With the growth of sectarian differences, there appeared a decided tendency toward the separation of governmental from ecclesiastical affairs. The grammar schools and colleges had been established for the public good as represented in both church and commonwealth. They had been founded and maintained by a remarkable combination of governmental, ecclesiastical, and private agency. Some of the colonies must be reckoned among the foremost of modern societies to exemplify direct governmental participation in educational affairs. But as governmental and ecclesiastical interests drew apart, the position of educational institutions was disturbed. This change tended to lessen the prestige of colonial systems of education among the more zealous adherents of the several religious denomina-

tions. At the same time, a growing distrust of the colleges appeared among those who were most in accord with the secularizing tendency of the time. These influences combined with many others to weaken the old grammar schools. In their stead there grew up a new type of secondary school, commonly known as the *academy*. For two or three generations following the revolutionary period this type was in the ascendancy. The effort to solve the problem of secondary education by this means ultimately failed. But the academy nevertheless occupies a place of great significance in the history of our educational institutions.

THE ACADEMIES

Both the name and the character of the new institution were suggested by English precedents. In England, dissenters from the established religion were excluded from both grammar schools and universities. In the latter part of the seventeenth century, following a suggestion of Milton, the non-conformist bodies proceeded to establish so-called academies. These schools were in the main of secondary grade. Yet they undertook to prepare candidates for the clerical office in non-conformist congregations; and they offered a wide range of literary and scientific studies, in free imitation of the universities. They even afforded instruction in some studies, chiefly of a technical and practical character, not commonly taught in the universities.

The American colonists were, many of them, in close relations with various bodies of English dissenters; and the fame of the English academies would seem to have influenced their thought in the matter of public education. At one time, the strong theological bent of their English prototypes reappeared in the new American schools; at another time, the resemblance was more obvious in the range and character of the studies offered. But the American academies soon came to have a well-defined character of their own, apart from any conscious imitation of English models.

As early as the year 1726, a school for classical and theo-

logical studies was established by the pastor of a Presbyterian congregation at Neshaminy, in Pennsylvania. It was described by a visitor as an "academy"; but was more commonly known as the "Log College," in allusion to the fact that it was conducted in a small building made of logs. This school in the wilderness was the center of deep and widespread interest in classical studies as well as in the religious life. It sent out large numbers of zealous pastors and teachers, who established "log colleges" all over the highlands of the middle and southern colonies.

Through the efforts of Benjamin Franklin, a school was established at Philadelphia, legally incorporated as an academy in 1753, which was probably the first institution in America to be formally designated by that title. It was under the control of a self-perpetuating board of trustees. A fund was raised by private subscription for its establishment and maintenance. This was supplemented by a grant from the city treasury and by tuition fees. But fees were remitted in the case of those who were unable to pay. This academy was organized in three departments or schools; viz., the Latin, the English, and the mathematical. The theological element was not prominent here. Much stress was laid on the teaching of the English language and literature, and the mathematical sciences. The school ultimately developed into the University of Pennsylvania.

Within two or three decades from the founding of this school at Philadelphia, a number of schools somewhat similar in character, and some of them bearing the name *academy*, were established in the middle and southern colonies. The new movement received fresh incentive and definiteness of direction from the establishment of the two Phillips academies, one at Andover in Massachusetts and the other at Exeter in New Hampshire, incorporated, the former in 1780 and the latter in 1781. These schools, well endowed, and conducted under self-perpetuating boards of trustees, were the pioneers of a long line of similar establishments in New England. Their influence extended to

remote states, especially in the growing west; and they rank to-day among the strongest and most influential of our secondary schools.

STATE SYSTEMS

Soon after the close of the revolutionary war, new state systems of education began to be established, in which special provision was made for secondary schools. The earliest and most remarkable of these was the University of the State of New York, erected in 1784 and remodeled in 1787. This institution is a notable example of the strong and increasing influence which French thought then exercised in American affairs. The conception of a university put forth by Diderot and others of the great French writers of the latter half of the eighteenth century, was first realized in the state of New York. The New York university embraced the whole provision for secondary and higher education within the state, with the exception of schools of a purely private character. It seems to have been intended at the outset to embrace elementary schools as well, but these were organized later under a separate administrative system. The university was placed under the control of a board of regents, consisting of the governor and the lieutenant-governor of the state, *ex officio*, together with nineteen others, elected by the state legislature. At first this board of regents had been identical with the board of trustees of Columbia college. But this arrangement was unsatisfactory for many reasons: because of the ecclesiastical character of the college, for one thing; and also because of the growing belief that the interests of the college were distinct from, if not opposed to, those of the new academies. The reorganization of 1787 accordingly made the board of regents a body distinct from the trustees of any institution included in the university. The trustees were to exercise control over their several institutions. But this control was made subject to the general and not at all rigorous supervision of the regents.

In 1813 the legislature of the state established a permanent fund known as the literature fund, the income of which was to be applied wholly to the support of secondary schools. The distribution of this fund was made subject to the control of the regents of the university.

This university set up by the state of New York appealed to the imagination of men by its comprehensiveness and novelty. It exercised great influence on later systems; but only one state and one territory seem to have modeled their scheme of public instruction after the New York pattern. An act of the legislature of Georgia, passed in 1785, provided that "All public schools instituted, or to be supported by funds or public moneys in this state, shall be considered as parts or members of the university." But the university of Georgia never realized the large and liberal plan proposed for it.

In the territory of Michigan, an act was passed in 1817 instituting a university of imposing character. The president and professors of this institution were empowered "to establish colleges, academies, schools, libraries, museums, athenæums, botanical gardens, laboratories and other useful literary and scientific institutions * * * throughout the various counties, cities, towns, townships, and other geographical divisions of Michigan." As may be supposed, this establishment existed mainly on paper. Yet it should be noted that before the act was repealed, in 1821, there had been opened under its provisions a college, a classical school, and several primary schools.

But although the comprehensive type of university organization was not widely adopted, there was a general desire in the early part of the nineteenth century to establish complete and well-rounded systems of public instruction. Primary education was still all too largely neglected. In the state systems which were from time to time devised, emphasis was laid at one time upon secondary schools, at another upon institutions of higher learning. Some of the best thought of our political leaders was devoted to the

problem of devising systems which should meet the needs of our rapidly growing states in all of the several grades of instruction.

The legislature of Tennessee declared, in 1817, that, "Institutions of learning, both academies and colleges, should ever be under the fostering care of this legislature, and in their connection with each other form a complete system of education."

Even more significant is the provision of the constitution of Indiana, adopted in 1816, that, "It shall be the duty of the general assembly, as soon as circumstances will permit, to provide by law for a general system of education, ascending in regular gradation from township schools to a state university wherein tuition shall be gratis and equally open to all."

For the most part, however, actual state agency in secondary education was as yet limited to the subsidising of privately managed academies. In Massachusetts, the provision for grammar schools under town control was continued after the colony became a state. But the law was so changed that only the larger towns were left subject to this requirement. At the same time academies established by private initiative were endowed by the legislature with grants of public lands. The state assumed no control whatever over the academies which it thus subsidised.

In Kentucky, the state legislature granted six thousand acres of public lands to an academy in each county. In Pennsylvania, colleges and academies received financial aid from the state for many years, culminating in 1838 in a general state system of educational subsidies. Five years later, such aid was discontinued. In others of the states, the granting of state subsidies, in money or in lands, to secondary and higher schools, was customary for many years. For the most part, there is but little of system or consistency observable in the distribution of such aid; and the state-aided institutions were not subjected to any sort of state control.

CHARACTER OF THE ACADEMIES

The type of secondary school which grew up under these conditions demands closer consideration. The old academies were generally endowed institutions, organized under the control of self-perpetuating boards of trustees or of religious bodies. They were established for the most part to serve the need of a wide constituency and not merely of a single community. They were often located in small country places. Many of them made provision for boarders as well as for day pupils.

They were not intended in any especial or exclusive sense for the training of future members of the learned professions. Many of them, to be sure, as time went on, drew near to the colleges and became known primarily as preparatory schools. In the western states, colleges were often organized with preparatory schools attached to them, and these preparatory schools were commonly called "academies." But such was not the earlier purpose of the academies. They were largely schools for the middle classes of society, and sought to give a good middle grade of instruction, with only occasional or subordinate reference to college preparation. They answered to a growing desire after learning for its own sake, or for the increased efficiency it would give in other than professional pursuits.

The training which they offered was regarded as more "practical" than that of the colleges. Their course of instruction presented a wider range of studies than that of the grammar schools; not infrequently wider than that of the colleges themselves. They laid new stress on the study of the English language, together with its grammar, rhetoric, and the art of public speaking. They gave instruction in various branches of mathematics, often including surveying and navigation. They made important beginnings in the pursuit of the natural sciences. Natural philosophy (physics) was a favorite subject, of which astronomy constituted an important division. Geography was also taught; and his-

tory, especially the history of Greece and Rome, and of the United States. French was sometimes taught; more rarely German. In the better academies, the Latin and Greek languages still constituted the substantial core of the instruction offered.

In the earlier days, the course of study in these schools was not well defined. In some subjects, especially English, Latin, and mathematics, a good degree of continuity of work was apparently maintained. In others, classes were formed at irregular periods. Many young men who were obliged to labor on the farms during the rest of the year, would attend an academy during the winter term, and the order of instruction would to some extent be arranged with reference to their needs. There was necessarily great diversity among the different institutions, those in the same state or even in the same county presenting great differences. When finally definite courses of study were laid out, they varied in length from three to four or five years.

Parallel courses were offered. That including classical studies and covering the required preparation for admission to some college was commonly regarded as the standard course of the school. Along with this might be found an English course. At a later date, a scientific course was often provided in place of or in addition to the English course.

The religious character of these schools should be noted. Many of them were established by religious bodies. It was during the period which we have under consideration that Catholic secondary schools began to appear in considerable numbers. These were for the most part established by the several teaching orders. The Society of Jesus founded institutions of secondary and higher education in the United States after the revolutionary war. The Brothers of the Christian Schools opened their first school in America at Montreal in 1838; and soon after set up establishments within the United States, at Baltimore and New York. These were doubtless of elementary grade at the start; but

the brethren extended their courses after a time to include secondary studies. Many conventual schools for girls were also established, and it became no uncommon thing for them to draw a large clientage from other than Catholic families.

The academies established by Protestant bodies were in some instances under direct ecclesiastical control; but more frequently their formal connection with ecclesiastical societies terminated with their legal incorporation. They were, however, generally characterized by great moral earnestness, on the part of both teachers and pupils; and many of them were remarkable for the intensity of religious life which they fostered. The religious instruction which they carried on concerned itself for the most part with the broad underlying principles of Christianity, avoiding in large measure the discussion of doctrines upon which the sects of Christendom are divided. It consisted mainly of lessons from the King James version of the Bible — both the Old and the New Testament. This was often supplemented by instruction in moral philosophy. Thus, the non-Catholic academies, even such as had arisen from the initiative of religious societies, tended toward the non-sectarian character which has been more fully exemplified in the public schools of later times.

The grammar schools had been exclusively for boys. Such was the case with many of the academies. Others of these schools were co-educational. With the increasing interest in education for women, there grew up a large number of academies for girls, which were all too often weighed down with the title of "female seminary." These two types of secondary education for girls prepared the way for two types of institution of higher education, both of which appeared in the fourth decade of the nineteenth century, viz., the co-educational college and the college for women exclusively.

The academies aroused and ministered to a strong and widespread desire for education. They greatly broadened the intellectual horizon of families and communities. They

reinforced the protest which was arising against the too narrow curriculum of the American colleges. In many other ways they rendered a timely and most efficient service in the betterment of American thought and life.

One specific service must receive separate mention. In the absence of special schools for the training of teachers, the better elementary schools were for a long time in the hands of teachers who had studied in the academies. In New York and Pennsylvania, this service of the academies received recognition at the hands of the state legislature. Special classes were organized in these schools for instruction in the art of teaching. A seminary for teachers was opened in connection with the Phillips academy at Andover. When state normal schools began to be established, in Massachusetts in the year 1839, suggestions for their organization and management were drawn from this seminary and from the current practice of the academies.

THE HIGH SCHOOL MOVEMENT

In the early part of the nineteenth century, there appeared in the several American states a strong demand for schools under the exclusive control of the state government. Various influences contributed to this sentiment. The Calvinistic view of the civil power had apparently prepared the way for state agency in education. The spirit which drove the Jesuits from France and during the French revolution made education a part of the program of democracy, roused an answering spirit in America. The steadily advancing separation between church and state kept alive the question as to the relation of the schools to both. So far as the higher education was concerned, it seemed to be the well-established theory that the state should grant charters to colleges, authorizing them to manage their own affairs under close corporations, with incidental aid from the state in the shape of gifts of land or money. And this had come to be the prevalent method of meeting the demand for secondary education. But the notion of higher institutions chiefly

supported and directly controlled by the state now began to get abroad.

The University of Virginia, under the guidance of Thomas Jefferson, led the way to the realization of this idea. In New Hampshire, the legislature undertook to transform Dartmouth college into Dartmouth university, without the consent of the college corporation. The attempt was frustrated by a decision of the United States supreme court. This decision was of the utmost importance in the history of American education as well as of American jurisprudence. It declared, in effect, that an institution founded and administered as was Dartmouth college was a private corporation; that the charter granted it by the state was in the nature of a contract, and accordingly could not, under the constitution of the United States, be altered by the legislature without the consent of the board of trustees. This decision established the inviolability of chartered rights. It thus gave security and stability to all incorporated institutions; it drew also a sharp distinction between "public" and "private" institutions, and placed the most of the then existing higher and secondary schools in the latter class. These schools served a public purpose and were open to public resort. They were in all but the legal sense public schools. But the clear definition of their legal status served to strengthen the rising demand for schools which should be public in every sense of the word. The growth of cities and many other causes combined to reinforce this demand.

The first step in the establishment of public secondary schools to supplement or fill the place of the academies was taken by the larger towns and municipalities, under the lead of Boston. The new institutions were a direct outgrowth of the system of elementary schools. The course of study in these schools was becoming better defined and was slowly extending. In Boston, it was extended downward in the year 1818 to include primary schools in which the first steps in reading were taken. The same system was extended upward in 1821 by the establishment of an "Eng-

lish classical school," which soon took the name of "English high school." The name seems to have been adopted in imitation of the high school of Edinburgh. There had been for many years close intellectual sympathy between the Massachusetts town and the Scotch capital. The new Boston school differed, however, in important particulars from its namesake in Edinburgh. The ancient languages were not included in its curriculum. It did not employ the monitorial method of instruction, then in vogue in Edinburgh. But the two schools were alike in this: that each was supported and controlled by the municipality and was an object of municipal interest and pride.

The English high school was established to meet the needs of the middle, and especially the commercial, classes. Its course of study was three years in length, embracing the English language and literature, mathematics, navigation and surveying, geography, natural philosophy (including astronomy), history, logic, moral and political philosophy. Latin and modern languages were added later, and the course extended to four years. Students were received into the high school from the elementary schools of the city, but were not at the first prepared in the high school for admission to college. That was still the function of the Latin school. But with the addition of foreign languages to its course of study, the English high school has fitted its students for admission to certain higher institutions, and particularly to the Institute of Technology.

Boston was still a town when she set up her English classical school, but became a city in the following year. The new school was proposed by the school committee, and was approved by the people, assembled in town meeting. Other Massachusetts towns soon followed the lead of Boston in this matter. Philadelphia, in 1838, established the Central high school, under special authorization from the Pennsylvania legislature. Baltimore followed, with the establishment of a "city college." Providence opened a public high school in 1843. Hartford, in 1847, transformed her old

grammar school into a school of the newer type. New York opened a "free academy" in 1848, the name of which was afterwards changed to "the College of the City of New York." This school was established in accordance with a special act of the state legislature, ratified by vote of the people of the city. Other high schools sprang up in various parts of the country before the year 1850 — in Connecticut, in New York, in Ohio. Since that time the movement has steadily continued, until now these schools are found in every state in the union, in cities, in smaller towns, and even occasionally in thickly populated country districts.

The zeal of communities in the establishment of these schools not infrequently outran the express provision of state school laws. But the movement encountered hostility from various sources, notably from those who regarded the academy as the final or best solution of the problem of public secondary education, and from those who were opposed on principle to the recognition of secondary education as a proper field for governmental agency. The legal questions involved in this latter contention were brought to a settlement in the supreme court of Michigan, in what is commonly known as the "Kalamazoo case." The decision of the court in this case was prepared by one of the most eminent of American jurists. It was summed up in the words, "Neither in our state policy, in our constitution, nor in our laws do we find the primary school districts restricted in the branches of knowledge which their officers may cause to be taught, or the grade of instruction that may be given, if their voters consent, in regular form, to bear the expense and raise the taxes for the purpose."

This case not only settled the question which it raised within the territorial limits of the state of Michigan. It settled also the general policy of the American commonwealths in this matter. The opinion of the court, in its ample setting-forth, made clear the fact that American thought and purpose were moving steadily toward a complete system of education, under full public control, its

several parts well knit together so as to form an organic whole.

But in several of the states the people were not left to work out the problem of secondary education in the isolation of scattered communities. In these states, well ordered systems of secondary schools were established by statute. As early as 1798, Connecticut authorized the opening of higher schools by the local authorities ("school societies"). In Massachusetts, the law requiring grammar schools in the towns was so far weakened, in 1824, that towns having a population of less than 5,000 were allowed to substitute therefor an elementary school, if the people should so determine by vote at a public election. This marks the lowest ebb of public school sentiment in the Bay state — at least so far as secondary education was concerned. The academies were then at the height of their prosperity. But two years later the return movement set in. It was enacted that every town having five hundred families should provide a master to give instruction in history of the United States, bookkeeping, geometry, surveying and algebra; and every town having four thousand inhabitants, a master capable of giving instruction in Latin and Greek, history, rhetoric, and logic. The young state of Iowa adopted a provision in 1849 expressly permitting the adding of higher grades to the public schools; and in 1858 authorized the establishment of county high schools. In New York, the systematic grading of the schools went steadily forward; and the "academic departments" of these schools, corresponding to the high schools of other states, formed a part of the university of the state of New York and received financial aid from the literature fund. In Maryland, the county academies, which had displaced the grammar schools of colonial days, continued for many years to receive financial aid from the state, and only in comparatively recent times were merged into a state system of high schools.

Other important state establishments have taken shape at so recent a date that they will be described later under the account of present-day systems of schools.

THE OLD AND THE NEW

We have seen that by the middle of the nineteenth century a great change had come over secondary education in the United States. Two aspects of the new order of things are worthy of note: First, the position in which it placed the old academies; secondly, the tendency which it marked toward a closing up of gaps in the system of public instruction.

The academies had long been the ordinary and accepted agency for secondary education. They had provided a general training for the great body of students. They had also drawn near to the colleges, and now prepared a large proportion of the candidates for admission to the freshman class. Private schools had grown up which paid especial attention to fitting boys for college; and from the earliest times many had received such preparation at the hands of private tutors, and particularly under the personal direction of clergymen. But the academies were now *par excellence* the preparatory schools of the country. The growth of high schools had taken away from them the character of the ordinary provision for secondary education. Many of them declined as the high schools advanced; many were given over to the communities in which they were conducted and became high schools, under public management. Those that survived laid more and more stress on their function of preparing for college. A goodly number of these are stronger now than ever before; and new schools of this type are founded from time to time. In recent years the increase of wealth, the rise of new social distinctions, dissatisfaction with the colorless religious character of the high schools, and many other causes, have caused a new demand for such schools to arise. They prepare for college, but do not in general look upon this as their sole function. They are recognized as constituting a highly important part of American provision for public education. While the high schools are for day pupils only, the acade-

mies are generally boarding schools. They afford favorable ground for the deep rooting and vigorous growth of traditions of culture and scholarship. The more famous of them draw students from long distances, and accordingly exercise a widespead influence upon American educational standards.

The high schools, on the other hand, are an evidence of the widespread desire in America for complete systems of education under public management. The impulse which resulted in their establishment is closely related to that which, especially in the southern and western states, led to the founding of state universities. The organic connection between the high schools and schools of elementary grade has already been noted. At the first there was a recognized gap between the high schools and institutions of higher learning. The earliest high schools were intended specifically for those who were not preparing for college. But there soon appeared a disposition on the part of the public school authorities to close up this gap. Studies regarded as distinctively preparatory to college were from time to time introduced into high school courses. Of these, Greek had and still has the most precarious hold upon public favor. Yet there were and still are even small communities remote from the great centers of wealth and learning, where Greek has an assured and honored place in the high school curriculum.

A CONTINUOUS SYSTEM OF PUBLIC INSTRUCTION

It should be stated here that well-established American usage now recognizes three consecutive stages of instruction, commonly distributed as follows: Eight years are assigned to the elementary school; four years to the high school or academy, following directly upon the elementary course; and the four years next following to the college, which offers finally the bachelor's degree. The whole course from the primary school to the first degree is accordingly sixteen years in length. It should be noted, however, that there is a growing disposition to recognize the first two years of the

college course as offering instruction which is essentially of secondary grade. And there is also a growing demand for the introduction of secondary studies and secondary methods into the upper grades of the elementary school course.

The tendency of public high schools to assume the function of preparation for college met with strong opposition. It was claimed that this service could best be rendered by special schools conducted for that express purpose. The discussion of this question has brought out two contrasting ideals of American life, and has shown more clearly the nature of the movement which called the high school into being.

The colonial period was a time in which distinctions of rank were still fairly well defined in American society. The higher schools of that time, intended especially for the ruling class, had no organic connection with the lower schools. The secondary schools were a part of the higher system, and had little or nothing to do with the lower.

The first fifty years or more of independence was a time of readjustment. The earlier system of social levels was gradually transformed into a continuous series of gradations. Society became an inclined plane, as it were, with free and open passage up and down the scale. Every school child was taught to consider himself as started on a way which might lead to the highest places.

It seems inevitable that public education should in turn have been influenced by the sentiments which it had helped to form. An unlimited system of public schools was necessary to the realization of the unlimited aspiration of the people. The prevalent instinct slowly rose to a conscious determination that there should be no *cul-de-sac* in the educational systems of the republic.

THE SCHOOLS AND THE COLLEGES

Even when the high schools had begun to prepare their more favored students for college, the connection between the secondary and the higher institutions was not so close as

was desired. In some of the leading states of the east, the chief, or indeed the only, provision for higher education was in institutions managed by private corporations. In many of the newer states, there were growing up universities under full state control. But these universities were supported out of funds separate from those devoted to the common schools, and were controlled by separate administrative boards. The requirements for admission to college were determined by the college faculties, with only incidental reference to the purely educational problems confronting the secondary schools. The fitness of candidates for admission was determined by an examination, conducted at the college, by college instructors, and covering the requirements which the college had prescribed.

This system, to be sure, possessed great advantages. It compelled all schools which undertook preparation for a given college to come up to a definite scholastic standard imposed from without. It exercised no authority over the schools, but exerted an influence which a preparatory school could not escape. Besides, the standard set for classes preparing for college had an indirect influence on classes in the same school which were pursuing other lines of study. So the most powerful single agency affecting the course and the methods of instruction in the better high schools, as in the academies, was for many years the entrance examinations of the several colleges.

But there were evils attendant upon this system. When the excellence of a four-year course of school instruction was to be tested by a single examination at the end of the course — this examination being conducted by the instructors in another, and often a remote institution, with sole reference to the plans and purposes of that institution,— it was inevitable that the lower school should become merely tributary in all essential particulars to the higher. The college examination became the chief end and aim of much of the work in our secondary schools. There appeared a marked tendency to substitute a cramming process for real educational

procedure. Teachers in secondary schools were too largely turned aside from independent investigation of the essential problems of secondary education, to the more petty inquiry into the exact nature of the entrance examinations at certain colleges. It was clear that such a state of things did not answer to the organic continuity of instruction which American social conditions seemed to demand.

The attempt to correct this evil has taken several different directions. Some of the most interesting movements affecting our secondary education within the past three decades have had this origin. How may a more vital relation be established between secondary schools and colleges, which shall conserve the highest educational interests of both? Such is the general question for which a solution has been sought.

THE "ACCREDITING SYSTEM"

One of the earliest and most noteworthy attempts at its solution is the so-called accrediting system, introduced by the University of Michigan in 1871. Under this system, the university admits to its freshman class, without examination, such graduates of approved secondary schools as are especially recommended for that purpose by the principals of those schools. This system has met with great favor and has had widespread application. The United States commissioner of education reported in 1896, that there were then 42 state universities and agricultural and mechanical colleges, and about 150 other institutions in which it had been adopted. It depends upon a purely voluntary agreement between the secondary schools and the higher institutions. The college or university satisfies itself that the secondary school applying for such recognition is properly taught. Usually a committee of the faculty is sent to inspect the school, and the school agrees to submit itself to such inspection. It is the school rather than the individual that is examined; and the inquiry relates chiefly to the vitality, intelligence, and general effectiveness of the instruction.

Hardly any two institutions follow exactly the same method in the practice of accrediting schools. The Michigan system provides for inspection of each school by a committee of the faculty, consisting of one or two members. On a favorable report from this committee the school is accredited for one, two, or three years, according to the degree of established excellence which it presents. With the spread of the system to other institutions, it has differentiated on the one hand in the direction of a more frequent and thorough-going inspection of the schools, and on the other hand in the direction of less thorough inspection or none at all. Perhaps the lowest outcome of this differentiation is represented by the announcement of the authorities of one college that "Students bearing the personal certificates of a former teacher, concerning studies satisactorily completed, will be given credit for the work they have done."

On the other hand, the highest grade of efficiency in university inspection is found in such a system as that maintained by the University of California. Here the accrediting of schools is in the charge of a committee of the academic senate, representing the chief departments of instruction. All secondary schools within the state which apply for accrediting — public high schools, private schools, and institutions under corporate or ecclesiastical management — are visited each year under the direction of this committee by several members of the teaching force of the university. A given school is commonly so visited and inspected in the course of each year by instructors from each of the university departments of English, Latin, history, mathematics, and physics. In some instances, the departments of Greek, modern languages, chemistry, and the biological sciences, or any one or more of them, may be added to the list. In other cases, the visitor from the department of English, for example, may, by special arrangement, examine the school for the Latin department; and other economical combinations are made from time to time.

The heads of departments visit many schools in person; university instructors of various subordinate grades share in this labor; but so far as possible the assignment to such duty is limited to persons of considerable scholastic experience, and experience as a teacher in secondary schools is regarded as a qualification of no small importance. The men who go out for the purpose of such visitation are at the time engaged in ordinary university instruction. The loss to their classes from the interruptions to continuous work which their occasional absence must cause, is minimized by various devices. The expense of the visitation is borne by the university. A school may be "accredited" without a favorable report in all subjects, but the report must be favorable in a sufficient number of lines to indicate that the school is a real educational institution. Superior excellence in a single isolated department is not regarded as constituting a claim to a place on the university list.

The purpose of a well-considered accrediting system is not primarily to provide a means whereby applicants for admission to college may escape a dreaded examination. It is rather to encourage and build up strong and efficient schools of secondary grade. This result the system has undoubtedly tended to bring about. It has drawn our secondary and higher grades of instruction into closer articulation and sympathy one with the other. It has tended to release the teachers in secondary schools from the domination of merely formal examination requirements, and has turned their attention to vital matters in the domain of education.

On the other hand, the system has had and still has serious disadvantages. It tends to foster a too prevalent disposition to dispense with or evade all tests of accurate scholarship in the shape of definite examinations. It entails a heavy burden upon the higher institution; it demands large expenditures of money and of the time of university instructors. In the University of California, the actual cost in money for the traveling expenses of the inspec-

tors is about equal to the salary of an assistant professor. The aggregate of the time required each year by all departments for the purposes of the examination of schools is not far from three full academic years. Counting the average salary of the inspectors as that of an associate professor, we have here an approximate total cost for services and traveling expenses of between $8,000 and $9,000 annually. It is, moreover, impossible so to conduct the inspection that all departments of all schools shall be tried by uniform or even consistent standards of excellence. Nor does the accrediting system wholly obviate the evil of subjecting the secondary schools to tests and influences somewhat foreign to the real purposes of secondary education. It cannot be regarded and is not generally regarded as a final solution of the problem with which it deals. But it marks a very great advance toward that end; and it is safe to say that its present advantages greatly outweigh its obvious disadvantages.

SCHOOL AND COLLEGE ASSOCIATIONS

Parallel with the later development of the accrediting system, there have grown up important voluntary associations of instructors, in which representatives of the colleges meet with representatives of the secondary schools for the discussion of topics of common interest. The parent society of this sort is the New England association of colleges and preparatory schools, organized at Boston in 1885. The object of this association was declared to be, "The establishment of mutually sympathetic and helpful relations between the faculties of the colleges represented and the teachers of the preparatory schools, and the suggestion to that end of practical measures and methods of work which shall strengthen both classes of institutious by bringing them into effective harmony."

This organization grew out of a previously existing state association of secondary school teachers in Massachusetts. It in turn prompted the establishment of the commission of colleges in New England on admission examinations. This

commission, formed by agreement among the several New England colleges, and possessing no authority, has by its recommendations done much to unify the requirements for college matriculation. Its most notable achievement has been the mapping out of requirements in the English language and literature. It has made important recommendations also with reference to courses in the ancient classics and the modern languages.

The example of New England has been followed by other sections of the country. The association of colleges and preparatory schools in the middle states and Maryland came into existence in 1892, growing out of the college association of Pennsylvania, established five years earlier. The north central association of colleges and secondary schools was formed at Evanston, Illinois, in 1895; and the association of colleges and preparatory schools of the southern states, at Atlanta, Georgia, later in the same year. State organizations somewhat similar in character are found in a number of the states, as in New York, Ohio, Tennessee, Colorado, Michigan, and both Dakotas.

These various societies, through their discussions and recommendations, have exercised a vast influence upon the development of our secondary education.

THE COMMITTEE OF TEN ON SECONDARY SCHOOL STUDIES

But the chief landmark in the recent history of this grade of school is the work of the committee on secondary school studies, appointed by the National educational association in 1892, and commonly known as the "committee of ten." This committee was the outcome of a movement within the national association in the direction of uniformity of college entrance requirements. Its chairman was the president of Harvard university. In its membership were included the United States commissioner of education and some of the foremost representatives of both secondary and higher education in America. Not limiting itself to the mechanical adjustment of relations between the high school and the col-

lege, this committee proceeded to consider the problem of secondary education from an educational point of view. Nine sub-committees of ten members each, were appointed to prepare reports on the several ordinary departments of secondary school instruction, viz., Latin, Greek, English, other modern languages, mathematics, physics (with astronomy and chemistry), natural history (biology, including botany, zoology, and physiology), history (with civil government and political economy), and geography (physical geography, geology, and meteorology).

The committee of ten, having secured carefully prepared reports from its sub-committees, and having examined a large number of the courses in actual use in secondary schools, drew up a report which was published by the United States government in December, 1893, together with the reports of the several sub-committees. The contents of this document may be briefly summarized as follows:

In all of these discussions, the distribution of the years of school life now generally followed in the educational administration of the American states is assumed as a datum. The demand for an earlier introduction of secondary school studies is, however, reiterated by several of the sub-committees. They call attention to the disadvantage to students pursuing, for instance, the study of Latin, which results from postponing the beginnings of that study to the ninth year of the school course, when the student has already passed the most favorable time for memorizing paradigms and a strange vocabulary. The committee of ten, while approving strongly of these recommendations, confine their proposals to improvements in the ordinary four-year secondary course.

After discussing the principles which should guide in the framing of courses of study, the committee present four sample courses, which may be taken as illustrations of the application of those principles. These sample courses are, however, generally regarded as the least successful and significant outcome of the committee's labors. The portions of the report which represent the most mature deliberation

are those which propose general principles for guidance in the making of such courses.

The committee lay great stress on the correlation of studies in secondary schools: the unifying of many subjects into a well-knit course of instruction, through the recognition of their numerous inter-relations. They endorse the unanimous recommendation of the sub-committees that the instruction in any given subject shall not be different for a student preparing to enter a higher institution from that for students who go no further than the high school. They make an urgent plea for more highly trained teachers. They declare against a multiplicity of "short information courses," such as have been given in many high schools in times past: a dip into one science followed by a dip into another, and no deep draught from any. Instead, they recommend that such subjects as are studied be pursued consecutively enough and extensively enough to yield that training which each is best fitted to yield. They would have continuous instruction in the four main lines of language, mathematics, history, and natural science. In particular, they recommend that in the first two years of a four-year course, each student should enter all of the principal fields of knowledge, in order that he may fairly "exhibit his quality and discover his tastes." They recommend the postponement of the beginning of Greek to the third year, in order that the student may not find himself at the bifurcation of the course into classical and Latin-scientific courses, before he is ready, or his advisers sufficiently informed as to his capabilities, to make an intelligent choice. The committee would require in each course a maximum of twenty recitation periods a week; but they would have five of these periods devoted to unprepared work; and would reserve double periods for laboratory exercises whenever possible.

Within the limitations indicated above, as to continuity and extensiveness of studies in each of the broad divisions of knowledge, the committee would leave to the individual student and his advisers the largest possible freedom in the

choice of studies. With reference to requirements for admission to college, the committee recommend "that the colleges and scientific schools of the country should accept for admission to appropriate courses of their instruction the attainments of any youth who has passed creditably through a good secondary school course, no matter to what group of subjects he may have mainly devoted himself in the secondary school." Describing more exactly what might be considered "a good secondary school course" for this purpose, they propose that it shall consist of any group of studies from those considered by the sub-committees, "provided that the sum of the studies in each of the four years amounts to sixteen, or eighteen, or twenty periods a week,— as may be thought best,— and provided, further, that in each year at least four of the subjects presented shall have been pursued at least three periods a week, and that at least three of the subjects shall have been pursued three years or more."

This report called forth a very active discussion, which has not yet come to an end. The definite courses of study which it suggested have not been widely adopted; nor have college admission requirements been made uniform in the manner which it proposed. But its influence has been far-reaching and, in the main, highly beneficial.

THE ELECTIVE SYSTEM

Since the early days of the academies, it has been customary in many schools to offer alternative courses; one of them classical, the other "modern." Other options have been added from time to time, so that now a large school commonly offers several parallel courses. But especially within the last twenty years, there has appeared a strong demand that instead of a choice of courses the students be offered a wide range of choice in particular subjects.

Several influences have combined to bring about this demand. The general adoption of an elective system in the colleges may be mentioned. Teachers have objected to close prescription in high schools when freedom is increasing

in the higher institutions. The conviction that the secondary schools should not be merely tributary to the colleges is gaining ground. What is good education in the high school, it is maintained, is good preparation for the higher schools. The independence of the secondary school carries with it independent responsibility for the supply of the actual educational needs of the youth attending such a school. And the students in the high schools are thought to have reached the stage of differentiation of educational needs. The need of the state, moreover, which education must satisfy, is the need of full spiritual unity underlying the utmost diversity of talent and culture. The elementary schools, with their single course of study, are conservators of spiritual unity. The secondary schools can and ought to serve a different purpose. Their instruction should be adapted to the cultivation of the diverse talents of the youth enrolled in them. No two students have exactly the same aptitudes; so far as possible, every student should pursue a different course of instruction from every other student.

It will be seen that one tendency of this doctrine is to substitute a quantitative for a qualitative consideration of the curriculum. The most diverse subjects are held to be equivalent for the purposes of general culture, if pursued for equal periods of time under equally favorable conditions. A high school curriculum, under this system, would consist of a fixed number of units of study, to be chosen at will from the whole number of studies taught in the school. Certain utterances of the committee of ten have tended to strengthen this quantitative view of the curriculum. It has received reinforcement, also, from some prominent institutions of higher instruction, as the Indiana and the Leland Stanford Junior universities, which have stated their admission requirements for the most part in quantitative terms.

In the attempt to reduce this doctrine to practice, certain modifications necessarily enter. The choice of studies cannot be left simply to the immature pupil. He must have the advice of parents or guardians, and particularly the

advice of the principal of the school. Even if other subjects may be given over to absolute freedom of election, studies in English are found to be indispensable in every course. Little by little, other subjects are acknowledged to be essential; until it appears that there is little difference in practical working between a system of parallel courses rendered flexible by the allowing of occasional substitutions, and an adequately supervised elective system. The committee of ten enunciated an important regulative principle in proposing that each secondary school curriculum should provide an outlook into the several domains of language, mathematics, history, and natural science. From whichever side the problem of the course of study is approached, the discussions seem to tend toward a requirement in each of several broad fields of knowledge, together with large freedom in the choice of particular subjects within those fields.

COLLEGE ENTRANCE REQUIREMENTS

The latest attempt at an adjustment of the relations of secondary schools and colleges, to the educational advantage of both, is contained in the report of the committee on college entrance requirements. It seems not unlikely that this report may be more fruitful of tangible results than any of the papers relating to the same subject which have preceded it.

In 1895, the National educational association, through its departments of secondary education and higher education, appointed a committee to consider the specific question of the unification of college entrance requirements. This committee, as finally constituted, consisted of fourteen members, representing the high schools and universities of different sections of the country, under the chairmanship of the superintendent of high schools of the city of Chicago. The first important service rendered by the committee was the preparation and publication of a table showing the actual entrance requirements of sixty-seven representative colleges, universities, and higher technical schools in the United States.

The committee's final report was presented at the meeting of the National educational association in July, 1899. This report is mainly devoted to the attempt to establish "national units, or norms," in the several subjects taught in the secondary schools as preparatory to the college course. The fundamental problem, in the language of the committee, "is to formulate courses of study in each of the several subjects of the curriculum which shall be substantially equal in value, the measure of value being both quantity and quality of work done. It is not to be expected, nor is it desired, that all colleges should make the same entrance requirements, nor is it to be expected that all schools will have the same program of studies. What is to be desired, and what the committee hopes may become true, is that the colleges will state their entrance requirements in terms of national units, or norms, and that the schools will build up their program of studies out of the units furnished by these separate courses of study." This hope is reinforced by experience with college entrance requirements in English, which have within the past few years become nearly uniform throughout the country, on the basis of the recommendations of the commission of colleges in New England on admission examinations.

In the determination of these norms, the committee received assistance from several bodies of expert scholars in the several branches of instruction. The American philological association proposed courses of study in Latin and Greek. The modern language association of America rendered a like service with reference to the French and German languages. The American historical association and the Chicago section of the American mathematical society reported on courses in history and mathematics. And the department of natural-science instruction of the national educational association presented recommendations relating to physical geography, chemistry, botany, zoology, and physics. These several supplemental papers are published in connection with the committee's report. The committee express

general approval of the courses recommended in these papers, suggest some slight modifications, and offer an independent report on the subject of English. Their further recommendations are summed up in fourteen resolutions, of which the following seem to be of the greatest general significance:

I. That the principle of election be recognized in secondary schools.

IV. That we favor a unified six-year high school course of study beginning with the seventh grade.

VI. That while the committee recognizes as suitable for recommendation by the colleges for admission the several studies enumerated in this report, and while it also recognizes the principle of large liberty to the students in secondary schools, it does not believe in unlimited election, but especially emphasizes the importance of a certain number of constants in all secondary schools and in all requirements for admission to college.

That the committee recommends that the number of constants be recognized in the following proportion, namely: four units in foreign languages (no language accepted in less than two units), two units in mathematics, two in English, one in history, and one in science.

XII. That we recommend that any piece of work comprehended within the studies included in this report that has covered at least one year of four periods a week in a well-equipped secondary school, under competent instruction, should be considered worthy to count toward admission to college.

The committee disclaim any implication that different subjects may be regarded as educationally equivalent. "This proposition" [resolution XII], they say, "does not involve of itself, necessarily, the idea that all subjects are of equal cultural or disciplinary value, * * * yet the advantages to our educational system of the adoption of this principle will be so great as far to outweigh any incidental disadvantage which may accrue from accepting as of equal value for

college purposes the more or less unequal values represented by these studies."

COURSES OF STUDY

The actual courses of study in our secondary schools show great diversity. There is here, as in other portions of the American educational system, no semblance of national control. There are but few states if any where the course of study is prescribed by state authority. This matter is generally left to the discretion of municipal or district boards of education. Yet the differences between neighboring schools, or between the schools of different sections of the country, are not so great as one might suppose. Owing to the extensive circulation of all sorts of educational publications, and the frequent meeting of teachers one with another in educational conventions, there is a surprising approach toward uniformity in the educational provisions found in all parts of the country. Even the poorer and more backward sections are often found striving consciously and earnestly after the ideals proposed by more favored districts. High schools may be found having courses ranging all the way from one to six years in length; but the four-year course is the generally recognized standard. Twenty years ago, it was common to find courses weighed down with a large number of subjects, many of them pursued for only a fraction of a year. This was notably true of subjects in natural science; but it is true to a much less extent at the present day. In spite of all assaults made upon the classical studies, they are apparently growing in favor. It would perhaps be fair to say that in many of the better schools, public as well as private, the classical course is commonly regarded as the standard, from which the other courses pursued in the same school are looked upon as variants. But the classical course now commonly includes one or two years of natural science.

The courses given below represent three different types of school:

1. Courses in Phillips academy, Andover, Massachusetts. — an incorporated and endowed boarding school for boys.

[The figures in the columns indicate the number of recitation periods a week devoted to the several subjects. Figures in parentheses indicate that the subjects for which they stand are alternative with others in the same column.]

	CLASSICAL COURSE				SCIENTIFIC COURSE			
	Class IV	Class III	Class II	Class I	Class D	Class C	Class B	Class A
English	4	2	2	Eighteen hours selected from the foregoing subjects, with the addition of physics, trigonometry, mechanical drawing and zoology.	4	2	2	Eighteen hours selected from the foregoing subjects, with the addition of trigonometry, mechanical drawing, zoology, political economy and physics.
Latin	6	5	5		6	4	(2)	
Greek	....	4	5		....	....	.....	
French	....	(4)	(1)		....	(4)	(2)	
German	....	(4)	(1)		....	(4)	(2)	
Algebra	2	2	2		2	3	3	
Geometry	2	....	...		2	3	3	
History	....	....	3		....	....	4	
Natural Science	2	....	..		2	....	.....	
Chemistry	....	....	....		....	2	(4)	
Botany	....	....	...		....	....	(2)	

2. Courses recommended for the high schools of Minnesota by the state high school board.

	LATIN SCIENTIFIC COURSE			
	First year	Second year	Third year	Fourth year
English	5	5	5	5
Latin	5	5	5	5
Mathematics	5	5	.....	5
History	.....	5	5	.....
Natural science	5	.....	5	5

In Latin, first year, grammar; second year, Cæsar; third year, Cicero; fourth year, Virgil. In mathematics, first year, algebra; second year, plane geometry; fourth year, solid geometry and higher algebra. In natural science, first year, zoology or botany; third year, physics; fourth year, chemistry.

Literary Course: as above, substituting four years of German for Latin.

Classical Course: as above, substituting Greek grammar and Anabasis for equivalents.

English Course: as above, substituting for Latin four credits chosen from botany, physiography, bookkeeping, civics, history, political economy, and senior common branches.

3. Course for Public Latin school, Boston, Massachusetts:

	Class VI	Class V	Class IV	Class III	Class II	Class I
English	3	3	3	3	3	3
Latin	5	5	7 [4]	4	5	4
Greek	.....	.....	[4]	5	5	5
French	.....	.....	[3]	3	2	.....
German	.....	.....	.....	.....	.....	5
Arithmetic	4 [5]	4	.....	.....	.....	.....
Algebra	.....	.....	4 [3]	3	3	.....
Geometry	.....	.....	.....	.....	.....	4
History	3	3	2	2	2	.....
Geography	3	3	1	.....	.....	.....
Physics	.....	.....	.....	.....	.....	4
Gymnastics	2	2	.....	.....	.....	.....
Military Drill	.....	.....	2	2	2	2

The brackets indicate an assignment of hours for the spring term which differs from that in the same subjects for the remainder of the year. Botany, physiology and hygiene are studied during the spring term in the hours assigned to geography in the table. Objective geometry is studied in connection with arithmetic in classes VI and V. Plane geometry is begun in the hours assigned to algebra in class II.

DIFFERENTIATION OF SCHOOLS

The differentiation which appears everywhere in our secondary education is not limited to the diversifying of studies within the several schools; it appears also in the erection of special schools for special classes of students. In the first place, we may note the provision for separate schooling of

boys and girls. The grammar schools of the seventeenth and eighteenth centuries were for boys alone. A number of the old academies were co-educational. Early in the nineteenth century, academies for girls exclusively were established, and large numbers of such schools have flourished down to the present day. A public high school for girls was established at Boston in 1826, but it was short-lived, owing to the large expense which it entailed. At Providence, Rhode Island, in 1843, a co-educational high school was opened; and the most of the high schools established since that time have been for both sexes.

The report of the United States commissioner of education for 1896–97 showed a total of 5,109 public high schools in the whole country, of which 35 were for boys only, 26 for girls only, and the remainder co-educational. The same report showed a total of 2,100 private high schools, academies, etc., of which 351 were for boys only, 537 for girls only, and 1,212 co-educational.

Another special type of school, the evening high school, has been established in a number of our larger cities. These schools have offered very elastic courses of study, suited to the varied needs of their clientage; and have been a great boon to many who have been obliged to work by day after the completion of an elementary school course.

In the northern and western states, white and colored students, where there are colored students of secondary grade, commonly attend the same schools. In the southern states, separate schools are provided for those of African race. The report of the commissioner of education for 1896–97 showed 169 schools in the United States for the secondary and higher education of colored youth exclusively. In many of these schools both grades of instruction were provided in the same institution. About 20 of the number were public high schools. The remainder were private or denominational institutions. In these 169 schools, 15,203 colored students were receiving instruction of secondary grade.

The European manual training exhibits at the centennial exhibition in Philadelphia, in 1876, gave a strong impetus to a movement already begun toward the establishment of manual training schools in American cities. St. Louis took a step forward, in 1879, in the establishment of such a school in connection with Washington university. Within a few years, similar schools were established, some under private and some under public control, in Baltimore, Chicago, Toledo, New York, Philadelphia, and other cities. In these schools, the idea of manual training for the purposes of general culture was usually uppermost, their projectors disclaiming any intention of establishing schools for the teaching of trades. More recently trade schools have been established in the largest cities, but for the most part under private initiative and control.

The commercial spirit of this country finds expression in the frequent appearance of such subjects as bookkeeping and commercial arithmetic in general courses of study. Special schools for distinctively commercial training are usually private ventures. These are found in great numbers in all parts of the country, generally going by the name of "commercial college" or "business college." In 1896–97, the commissioner of education presented reports from 341 such schools, with 77,746 students in attendance. Within the past decade there has been a growing demand for public commercial high schools in the larger cities. Thus far, comparatively slight provision has been made to meet this demand, but there is reason to expect that there will in the near future be a considerable expansion of our public education on this side. The business high school in Washington, D. C., may be mentioned as one illustration of the serious interest which has begun to appear in this side of secondary instruction.

The recognition of the importance and need of purely vocational schools of secondary grade puts a new aspect on the problem of the school curriculum. As has been shown, Americans are loath to recognize any necessity of a bifur-

cation of courses, such that the student taking one road finds the way open to indefinite advancement in higher studies, while one taking the other alternative finds a definite limit a little way before him. We have commonly failed to recognize the need of turning aside at some point, early or late, to master a distinct occupation in life. We have been willing to sacrifice expertness in one's calling to the hope of unlimited progress in higher culture. With the growing interest in technical training of a commercial or mechanical sort, there appears a set of difficult problems. A purely vocational course in a trade school presents no educational outlook beyond the mastery of the trade. If a final choice must be made between the highway of learning and the *cul-de-sac*, how shall it be so far postponed as to give to each pupil his full share of general culture, without reducing unduly his chance of full preparation for his life work? Still more difficult are the questions relating to certain semi-vocational courses, such as those of the manual training high school. The tendency is to regard these as primarily courses for general culture, with an outlook into the college or the higher scientific school. It is possible that at times their service as preparatory to the mastery of certain trades has been somewhat obscured in this view. But questions such as these are still before us for settlement.

THE STUDY OF ADOLESCENCE

One movement should be mentioned which is part cause and part result of the increased attention which is now paid to problems of secondary education, in themselves considered. Reference is made to the study of the several aspects of adolescence, as a stage in the mental development of individuals. Secondary education being essentially the education of adolescents, whatever throws light upon the peculiar psychology and natural history of this period of youth is of value to the educator. Many studies of particular phases of adolescent development have been made within the past few years, under the stimulus of investigations begun at

Clark university. These studies are as yet fragmentary; and they cannot be said to have led to well-defined reforms. Yet their influence has been manifest in the general tone and spirit of secondary education. They have prompted to a more sympathetic treatment of our youth in their time of spiritual reconstruction; to a better appreciation of the difficulties attending the passage from the intellectual dependence of childhood to the individual convictions of manhood and womanhood. They have led to a more careful observation of individual differences of development, and have strengthened the demand for greater freedom in both courses and methods of instruction. Such results warrant the hope that further researches in this field may lead to generalized knowledge of the needs and aptitudes of youth, which will be of the highest significance in educational practice.

METHODS OF INSTRUCTION

Methods of instruction in all secondary school subjects have been profoundly influenced of late from the side of the natural sciences. Laboratories have become common in high schools and academies. College entrance requirements have been extended to include laboratory work in physics, and, in some instances, in chemistry or in the biological sciences. In Massachusetts, in 1897, it was reported that 66 high schools were provided with good laboratory facilities, 80 had fair or limited facilities, and 98 had poor facilities or none.

In these laboratories, students perform representative experiments in the science they are pursuing, under the guidance and subject to the criticism of the instructor. These experiments are commonly regarded as illustrative of or preparatory to the statement of principles in a text-book. The "method of re-discovery" has influenced the practice of the schools; yet there are probably few school laboratories in which the students are expected to re-discover on their own account the laws of physics or chemistry, or of any other of the sciences. A fine blending of discovery, verification,

and correction seems to be the ideal of our best teachers of natural science. Much stress is laid on the accurate recording of observations and experiments. The students' note-books serve as one of the chief tests of the excellence of their work.

This is different from the prevailing method of a generation ago: the text-book was then the main reliance in school instruction, even for classes in the natural sciences.

The lecture system has never occupied a large place in our secondary schools. Clearness of exposition has always been, and will doubtless always be an important element in a teacher's equipment for teaching. Skillful instructors have at all times exercised themselves to help their pupils over difficulties in such manner as would prepare them to surmount future difficulties for themselves. And we read of old-time masters who were famous for their ability to ask searching and stimulating questions. But set lectures have not found favor here. Oral and written recitations by students, on the other hand, fill a large place in the work of our schools.

The recent extension of laboratory exercises, together with the proportionate reduction of text-book study, represents a notable change of view as to the function of instruction in general. We find accordingly that a like change appears in the treatment of other branches than the natural sciences. The attempt is now made to put the student in touch with first-hand materials of knowledge; and to guide and stimulate him to the end of making over these crude facts into real knowledge for himself. This procedure seeks to give full recognition to both the ideal and the sensuous elements in knowledge; and it indicates some appreciation of the fact that the ideal element to be truly ideal must be supplied by the active agency of the student's own thought, exercised upon the products of his own experience.

In the practice of the schools, we find these principles applied, for example, to the teaching of history. While text-books are not dispensed with, the effort is made to give the student some acquaintance with the sources of our historical

knowledge. In the study of literature, less attention is paid to historical summaries than was formerly the case, and more time is devoted to the study of literary masterpieces. In grammar and rhetoric, the study of principles is closely connected with the study of passages from literature which embody those principles in living forms; and with composition exercises upon topics which invite free expression. In the study of modern languages, facility in conversation is not commonly sought; though there are schools here and there which lay great stress upon this acquisition. The ability to read the languages readily and with understanding, and to enter into an appreciation of their literatures, are the ends chiefly striven for. To these ends, grammatical study is of course necessary. But the grammar is studied, on the whole, less abstractly than formerly, and more in its actual embodiment in literature. Greater effort is made now than a generation ago to secure a reading knowledge of the ancient classics. More hope is held out to classes in Latin and Greek, that they may, with attentive effort, attain to such mastery. There is much difference of opinion among leading teachers as to the proportionate attention to be paid to "sight reading;" and as to the value of the inductive method in the mastery of grammatical principles: but actual practice seems to be tending slowly toward a middle course, which retains much of the old-time thorough discipline in Latin and Greek grammar, but brings this training into more vital connection with the study of classic literature. The writing of Latin verse is generally discarded. Prose composition is receiving increased attention, and is now more imitative in its character than formerly, being commonly based on the Latin or Greek masterpiece which the class is studying at the same time. The question of approaching Attic through modern Greek has been warmly discussed, but the proposed change finds little, if any, acceptance in actual practice. In mathematics, much stress is laid upon the original demonstration of theorems, particularly in plane and solid geometry. It appears from time to time that instruction in mathematics is

weakened by a failure to insist upon the use of accurate language in demonstrations; and from time to time fresh efforts are put forth to strengthen the work on this side. At the present day, especial stress is laid in some quarters upon the need of more careful and accurate English expression in all school exercises. The attempt to teach English expression, oral and written, wholly through the medium of instruction in other branches does not promise well; but there is, fortunately, a growing recognition of the fact that all teachers must have at least some share in the responsibility for such instruction.

MORAL VALUES

The moral influence of secondary schools is undoubtedly the most important topic to be considered in this paper, but it is at the same time the most difficult to reduce to accurate statement. The religious background of moral instruction has already been referred to. It should be added that even in public high schools, from which all instruction in sectarian dogmas is strictly excluded, there is not uncommonly found a pervasive religious atmosphere, an influence emanating from the personal character of the instructors. In many of these schools, it is still customary to open the daily session with the reading of a passage from the Bible or the repetition of the Lord's prayer; or with the singing of a devotional or patriotic hymn. But whatever there may be of religious tone and spirit in these schools is of a very general and unobtrusive sort, and far removed from ecclesiasticism. Teachers wholly indifferent to dogmatic religion or in known opposition thereto are freely employed in the schools; but would probably be found to constitute only a small minority of the teaching force of the country. In some schools, elementary ethics is taught, along with elementary psychology, or perhaps economics. But this is unusual. The moral force of the high schools depends, then, mainly on the personal influence of the teachers in their instruction in the ordinary school subjects; on the government of the school; and on the relations of the students one with another.

Some subjects of instruction offer especial advantages as regards the formation of high ideals of conduct. The teaching of literature, and particularly the literature of the mother tongue, is found to be of great value in this respect — the more so, doubtless, when untimely moralizing is dispensed with, and noble sentiments are permitted to make their appeal through the charm of their artistic presentation. Choice works of plastic and pictorial art are rapidly finding their way into our school rooms. There is no systematic study of æsthetics in the school programs. These works of art are expected to accomplish their mission by their mere presence, sometimes supplemented by an informal discussion of their merits; or they serve to reinforce the æsthetic side of instruction in literature and in drawing. In some schools music is steadily cultivated, and holds an honored place.

History is probably, on the whole, the most neglected of the main lines of study in secondary schools; and the moral loss resulting from such neglect is serious. Greek and Roman history is commonly taught, at least in classical courses; but too often in a scrappy and inadequate fashion. Later European history receives some attention. The history of the United States is, perhaps, the most seriously slighted of all. The reason for this seems to be that the history of our own country is studied in the grammar schools; and it is not emphasized by the colleges as an admission subject. But a change for the better is slowly coming over the historical side of our school programs.

Skillful teachers, however, make instruction in all subjects moral — by arousing a pure desire for truth, a spirit of intellectual honesty, a will to work and to overcome difficulties, and a long line of modest and every-day virtues.

The government of our best secondary schools, and even of many of the smaller schools, which are comparatively unknown, presents much which may be regarded with genuine satisfaction. The relations of teachers and students are comparatively informal. There is little consciousness of official or artificial barriers between them. While strict dis-

ciplinary measures are often found necessary and are often enforced with vigor, the prevalent type of high school and academy government is that which treats the students as if they were already ladies and gentlemen, and throws them as far as possible on their own responsibility. Some interesting and successful experiments have been made in the organization of regular systems of self-government among students. It would seem, however, that only a principal who has the strength and skill to govern well is capable of making a school into a truly self-governing body.

Under any system of government, the social life of the school is the chief teacher of morals. It is one of the glories of American high schools that the children of rich and poor, of high and low, meet there on common ground. The fact that tuition in these schools is free to all, helps to bring about this result. It is unnecessary to point out the numberless bearings of this democratic spirit in the schools upon the pupils who are subject to its influence.

There is undoubtedly a growing disposition among families of wealth and high social position, to send their children to private schools; and this fact has tended of late to the increase of such schools. This disposition is, however, by no means universal. And while the atmosphere of a private boarding school is necessarily different from that of a public high school, it may be questioned whether in the great endowed schools of the country there is any marked encouragement given to purely aristocratic tastes and tendencies. The principals of boarding schools find it necessary at times to protest against providing students with too lavish a supply of spending money. And the fact that such protests are heard seems to indicate that there is a serious effort on the part of school authorities to minimize distinctions based on wealth.

STUDENTS

The social organization of the students in these schools calls for further notice. High schools and academies are much alike in this respect. The instinct of association is

strong in our youth, and it finds expression in all sorts of clubs, leagues, societies, and fraternities. The example of the colleges has been influential in the schools in this particular. The several classes are commonly organized, with class officers, and have occasional gatherings of a social character. The offices of the highest class in school are sought for with keen competition. Athletic associations, foot-ball and base-ball clubs, and the like, are usually maintained. Match games are played with neighboring schools, which call forth unbounded enthusiasm. Several schools are often joined in an athletic league; and the annual field days of these leagues are great occasions in the school year. The athletic records and trophies of a school are very highly prized. Well-equipped gymnasiums are now common in the larger schools, and provision for military drill is sometimes found; but formal exercises do not take the place of free competitive games. Debating clubs and other literary societies are maintained with much interest. Contests in debate with neighboring schools call forth a spirit of emulation like that displayed in athletic struggles. Musical organizations are perhaps less common, but are among the most pleasing of school societies. Annual publications by successive classes present a record of the varied interests of the larger schools, and afford a field for budding literary and artistic genius to show its quality. Secret, Greek-letter societies are sometimes formed after the fashion of the colleges. Not unfrequently, too, voluntary associations for religious culture and observance are maintained by the students. All of these organizations are commonly under the immediate control of the students themselves; teachers frequently attend the various meetings, but more as friendly advisers than as governors.

The completion of the course of study in a secondary school is celebrated in public with "graduation" exercises and the conferring of diplomas upon the members of the class. The graduates of a flourishing school will usually be found organized in an alumni association. The monthly or annual meetings of such an association become of increasing significance as the years pass and its numbers and influence are enlarged.

TEACHERS

A committee of the National educational association — the so-called committee of fifteen on elementary education — reported in 1895, among other topics, on the training of teachers for secondary schools. This committee declared that, "The degree of scholarship required for secondary teachers is by common consent fixed at a collegiate education." They proposed a course of special training for such teachers, consisting of instruction during the senior year of the college course in psychology, methodology, school systems, and the history, philosophy, and art of education; and a graduate year of practice in teaching, under close supervision, supplemented by advanced studies in educational theory.

This proposal is far in advance of common practice or requirement. Very few of the American states make any specific requirement for the high school teacher's certificate beyond that for a license to teach in the elementary schools. There are, on the other hand, many secondary schools in which teachers rarely obtain employment, if at all, unless they are college graduates; and there are large sections of the country in which common usage is rapidly tending in this direction.

The most of the leading universities and some of the higher normal schools are devoting especial attention to the professional training of teachers for schools of this grade. A committee of university professors, appointed for this purpose, has recently published a report, setting forth the existing legal provisions for the certification of high school teachers in the several states, and recommending practicable reforms.

A Massachusetts report for the year 1897 shows that one per cent of the high school teachers then employed in that state were graduates of scientific schools, 13 per cent of normal schools, 66 per cent of colleges, and the remaining 20 per cent unclassified.

In the state of New York, in 1898, 32 per cent of the

teachers in secondary schools (not including principals) were college graduates, 39 per cent were normal school graduates, 19 per cent were high school graduates, and 10 per cent had had other training. Of the principals, 51 per cent were college graduates, 35 per cent normal school graduates, 8 per cent high school graduates, and 6 per cent had had other training. These figures include private academies as well as public high schools. They include also one-year, two-year, and three-year schools, as well as fully-developed high schools and academies.

An inquiry into the preparation of teachers in the secondary schools of California, in October, 1897, showed that of 522 teachers then employed in the public high schools of the state, 308, or 59 per cent, were college graduates.

These figures may be taken as representing the conditions which obtain in some of the more favored sections of the country.

STATE SYSTEMS

The several states have been slow to organize general systems of secondary schools. In this respect secondary education stands in marked contrast with that of elementary grade. But a few of the states have made considerable progress in this particular.

The early history of secondary schools in Massachusetts has already been told. This state is the foremost in the union in the universality of its provision for secondary education. Every "town" (township) in the state is required by law to provide free high school tuition for all students who are prepared for that grade of instruction. Inasmuch as the whole state is divided into towns, this means that free secondary education is offered to every child in the commonwealth. Of the 353 towns in the state, 185 are required by law to maintain high schools; 70 others maintain high schools, though not required to do so; and those not maintaining such high schools are required to pay the tuition fees of qualified students within their limits who go elsewhere for high school instruction — and may pay for their trans-

portation also. The poorer towns receive help from the state in paying for tuition in outside schools. The high schools must offer a four-year course, of forty weeks to the year. They must prepare pupils for the state normal schools, and for higher scientific schools and colleges. There are 262 of these high schools in the state, employing 1,312 teachers. In 1897 Massachusetts paid $12,390,638 for public schools, of which $2,400,000, or 19 per cent, was for high schools. In 1896, the total municipal tax in the state was $15.23 on $1,000. Of this, $4.72 was for public schools, $0.91 of which was for high schools. These figures include the cost of school buildings along with the current expense of schools.

The organization of the university of the state of New York has been mentioned. Only so much of the varied activity of this great institution calls for notice here, as has to do with secondary schools. This, however, presents the most thoroughly organized state system of secondary education which has yet been developed on American soil. All incorporated secondary schools in the state and all other secondary schools which may, after official inspection, be admitted to membership by the regents, are institutions of the university. One of the six departments into which the work of the regents is divided is the high school department, which has to do with high schools, academies, and all interests of secondary education. Both the college and the high school department are under one department director. He is assisted by nine inspectors of schools, one of whom is employed as an inspector of apparatus, and by a large staff of examiners.

On the basis of reports made by this department, the regents distributed in 1898 a total of $209,250.48 in state funds to the secondary schools of the state. The method of distribution is as follows: (a) $100 is allotted to each school approved by the regents, without regard to its size or special attainments. (b) One cent is allowed for each day's attendance of each student in such schools; provided that

each student so counted must hold a "regents' preliminary certificate" for admission to the school, or the school must be approved by two university inspectors, as having a higher entrance requirement than the minimum prescribed for the preliminary certificate. (c) The state duplicates the amount raised by the schools for the purchase of approved books and apparatus up to the sum of $500 a year for any one school. (d) Grants are made on the basis of credentials obtained by pupils in the school who pass the regents' examinations — a method of "payment by results". In 1898, of the money distributed by the regents to secondary schools, about 25 per cent came under item (a); 22 per cent under item (b); 19 per cent under item (c); and 34 per cent under item (d).

The regents' examinations are held three times a year. They were taken in 1898 by 608 of the 645 secondary schools in the university. The diplomas issued by the regents to graduates of secondary schools are accepted by Cornell university and by other institutions of higher education in the state, in lieu of entrance examinations in the subjects which they cover. The report of the director of the high school department for 1898 says of the examinations: "In June 1898 the secretary stated to the regents that 10 years' experience had confirmed his views, given to the board in 1889, that examinations have the highest educational value and that the small minority which would abolish them are extremists. It is believed, however, that these tests would be more valuable if they were used for their educational value and not at all as a guide in distributing public money. Inspection will enable us in most cases to determine satisfactorily without regents examinations whether a school is maintaining a standard deserving aid from state funds."

A syllabus is issued by the regents for the guidance of instruction in university institutions. There is free consultation between the officers of the university and the instructors in the schools with reference to the contents of this syllabus. An annual university convocation, in which the representatives of all divisions of the university meet for

public discussion, forms one of the notable educational gatherings of the country.

In Maryland, a law of the year 1865 swept away the old academy system, and substituted for it a system of county high schools. This radical change was followed by a reaction. Later legislation took a middle course. A law enacted in 1872 provided for the establishment of high schools in the several counties, to be under the control of the boards of county school commissioners, or of district boards appointed by them. Each of these high schools must be "visited and examined annually by the principal of the State normal school, or a professor thereof," and must also be visited once in each term by the county examiner. The support of these high schools is provided for by the county school commissioners, who set apart for that purpose a portion of the ordinary school funds received from the state and the county. At the same time, a number of academies, about twenty in all, continue to receive direct donations, in various fixed amounts, from the treasury of the state.

We find in Indiana what is virtually a system of university accrediting of high schools, the administration of which has been turned over to the state board of education. In July, 1873, the board of trustees of Indiana university adopted a resolution to the effect that a certificate "from certain high schools" should entitle the bearer to admission to the freshman class. In August of the same year, the state board of education adopted plans under which the high schools which were worthy of such recognition should be designated and commissioned. In 1888 the following order was passed: "That hereafter no high school commission be granted except on a favorable report in writing, to be made to the state board of education, by some member of the state board, who shall visit the high school in question as a committee of the state board for that purpose.

"That all the high schools now in commission be visited by committees of the board as soon as may be, and that the present list be modified by the reports from such visitation,

"That in case of change of superintendent in any commissioned high school, the commission then existing shall be in force until a visitation shall be made by a committee of the state board."

The territory of the state was divided up among the members of the board for the purposes of such visitation.

By such simple means and without specific legal enactment, an important system of high schools has been built up. These schools rest upon a statutory provision authorizing local school authorities to provide for the teaching, not only of the elementary branches, in English, but also of "such other branches of learning and other languages as the advancement of the pupils may require." They are supported in the same manner as the elementary schools.

The supervisory power of the state board of education is secured by the broad provision that, "said board shall take cognizance of such questions as may arise in the practical administration of the school system not otherwise provided for, and duly consider, discuss, and determine the same."

This board consists of the governor of the state, the state superintendent of public instruction, the respective presidents of the State university, Purdue university, and the State normal school, the school superintendents of the three largest cities in the state, *ex officio*, and "three citizens of prominence actively engaged in educational work in the state, appointed by the governor." A four-year course of study for high schools, prepared by this board, is recommended for adoption by all schools which seek to be placed on the "commissioned high schools" list. The board announces that commissions will be granted to those high schools only which meet the following requirements:

1. The character of the work must be satisfactory.

2. The high school course must be not less than thirty months in length, counting from the end of the eighth year.

3. The whole time of at least two teachers must be given to the high school work.

4. The course of study must be at least a fair equivalent of that recommended by the state board.

It will be seen that this system provides for inspection of the schools only at long and irregular intervals. In practice, this defect is partially overcome by the close oversight which the universities exercise over those members of their freshman classes who enter on certificates from the schools. Such students are understood to be admitted to the university for a probationary period, in which they may show whether or not they have been properly prepared for the work they have undertaken.

The interest in secondary education which has grown up under this system has extended to all sections of the state. There are now 151 high schools on the "commissioned" list, including those of the more populous centers. There is growing up, also, a large number of "township high schools" in the more sparsely settled portions of the state. In 1891, there were 125 such schools with an enrollment of 920 pupils. In 1898, the number had grown to 389, with an enrollment of 8,459 pupils. Seven of these schools have been placed on the "commissioned" list.

The Wisconsin state system of free high schools was established in 1875. It provides for the maintenance of high schools by towns, incorporated villages, cities, or school districts or sub-districts containing incorporated villages or two-department graded schools within their limits. Two or more adjoining towns, or one or more towns and an incorporated village, may unite in establishing and maintaining a high school. These schools are managed by local high school boards, which are commonly, but not always, identical with the boards for elementary schools. They are supported primarily by local taxation; but a district is entitled to receive from the general fund of the state a sum not exceeding one-half the amount actually expended for instruction in the high school of such district, and not exceeding five hundred dollars in any one year; provided the school has been kept in accordance with certain requirements prescribed by law, and provided further that the total amount paid from the state treasury for this purpose in any one year shall not

exceed fifty thousand dollars. Such a school is under the direct inspection and oversight of the state superintendent. To receive state aid, a school must establish and maintain a course of study prescribed, or at least approved, by that official; and must be taught by teachers whose certificates he has approved. The state superintendent issues a manual for the guidance of these schools, containing general suggestions, courses of study, an outline of subjects and methods of instruction, and the text of the high school law. He is assisted in the visitation and supervision which the law prescribes by an inspector of free high schools, whom he appoints.

An effort has been made in Wisconsin to encourage the building up of high schools in the less thickly settled portions of the state. This undertaking has met with only a moderate degree of success. Here as elsewhere it has been found difficult to promote the general establishment of such schools by other units of civil administration than those which establish and maintain elementary schools. In Wisconsin the elementary schools are governed and supported by district school authorities, and not by township boards.

In the cities and towns of Wisconsin, the high schools are making marked progress, under the system of state supervision. Within the past few years, many of them have been housed in fine, new buildings, provided with excellent laboratories for instruction in the natural sciences. Important beginnings have been made also in the equipment of some of the schools for courses in manual training. State aid, to the amount of $250 a year for any one school, is extended to such courses by special provisions of the high school law. In the spring of 1899 six schools were receiving such special aid. At the same time there were in all 211 state-aided high schools in Wisconsin. Of these 56 had a three-year course and 155 a course four years in length. Of the four-year schools, 110 were accredited to the University of Wisconsin. The accrediting system was introduced by the university in 1878, and is carried on independently of the state system of

inspection. About a dozen of the largest and strongest high schools in the state are not included among those receiving state aid.

The courses of study are commonly designated as the English, the general science, the modern classical, and the ancient classical course. A given school will ordinarily establish the English course first, and will from time to time add the others in the order named. There were in 1899 ten schools in the state which carried the full classical course.

Minnesota has maintained a state system of high schools since 1881. At the head of this system stands the state high school board, consisting of the governor, the superintendent of public instruction, and the president of the University of Minnesota, *ex officio*. This board appoints a high school inspector and a graded school inspector. Any public high school in the state may become a state high school, and is then entitled to receive from the state the sum of eight hundred dollars annually. To be a state high school, it must admit students of either sex from any part of the state without charge for tuition, must provide a course of study covering the requirements for admission to the University of Minnesota, and must be subject to the rules and open to the inspection of the state high school board. This board determines, on the basis of the reports of its inspector, what schools are entitled to the bounty of the state; but not more than five schools may receive such aid in any one county in any one year. Provision is also made for state graded schools, of lower rank than the state high schools; and for the promotion of such schools to the rank of state high schools when they have attained such a degree of advancement as to entitle them to that designation.

The state high school board conducts a written examination of classes in the schools twice a year. Students who successfully pass such examinations, in any of the high school subjects, receive certificates for the subjects so covered; and these certificates are accepted by the university and the normal schools of the state in lieu of entrance exam-

inations in the subjects specified. The taking of this state examination is ordinarily optional with the school; and no grants of money are based on examination results. The state board may, however, require a school to take an examination as a part of the annual inspection. "The main purpose of state examinations", as stated by the inspector of high schools in his report for 1898, "is not to test the students, but to promote the general efficiency of the schools."

Perhaps the most significant thing about the Minnesota system is the encouragement it gives to high schools in the smaller towns. Communities all over the state tax themselves freely to supplement the bounty distributed by the state board.

Laboratory apparatus for the high schools is made at the state prison and sold to the schools at cost. For the year 1898–99, there were 110 graded schools and 97 high schools, under the supervision of the state high school board.

Several other states have made marked advance within the past few years in the direction of improved systems of secondary schools. These improvements have been gained through the untiring efforts of devoted friends of education, and should receive notice in such a place as this. But lack of space forbids. There is reason to regret, along with this omission, the unavoidable passing over of influential movements and important institutions which are in every way deserving of mention along with those which have been noticed; but the time has been wanting to consider fully the proportionate importance of these things, as well as the space for a full exposition of them all.

STATISTICS

Through the courtesy of the United States commissioner of education, the following statistics for the whole country for the year 1897–98 are presented in advance of their publication by the bureau of education:

TABLE I

STATISTICS OF SECONDARY SCHOOLS FOR 1897–98

	Public high schools	Private high schools	Public and private high schools
Number of schools reporting	5 315	1 990	7 305
Teachers of secondary students	17 941	9 357	27 298
Male	8 542	4 075	12 617
Female	9 399	5 282	14 681
Secondary students	449 600	105 225	554 825
Male	189 187	52 172	241 359
Female	260 413	53 053	313 466
Secondary students preparing for college	51 066	26 693	77 759
Classical course	27 935	16 361	44 296
Male	13 575	11 128	24 703
Female	14 360	5 233	19 593
Scientific courses	23 131	10 332	33 463
Male	12 056	7 429	19 485
Female	11 075	2 903	13 978
Graduates in the class of 1898	53 022	12 148	65 170
Male	19 247	6 302	25 549
Female	33 775	5 846	39 621
College preparatory students in the graduating class	14 552	5 388	19 940
Male	6 699	3 628	10 327
Female	7 853	1 760	9 613

TABLE II

STUDENTS IN CERTAIN COURSES AND STUDIES IN PUBLIC HIGH SCHOOLS IN 1897–98

COURSES, STUDIES, ETC.	Number students	Per cent to total number secondary students	Male students	Per cent to total number male students	Female students	Per cent to total number female students
Students preparing for college :						
Classical course.....	27 935	6.21	13 575	7.18	14 360	5.52
Scientific courses...	23 131	5.15	12 056	6.37	11 075	4.25
Total preparing for college.....	51 066	11.36	25 631	13.55	25 435	9.77
Graduating in 1898....	53 022	11.79	19 247	10.17	33 775	12.97
College preparatory students in graduating class[1].....	14 552	27.45	6 699	34.81	7 853	23.25
Students in						
Latin	223 307	49.67	87 529	46.27	135 778	52.14
Greek	14 021	3.12	7 656	4.05	6 365	2.44
French	33 917	7.54	12 006	6.35	21 911	8.41
German	59 577	13.25	23 336	12.34	36 241	13.92
Algebra.....	252 358	56.13	106 676	56.39	145 682	55.94
Geometry.....	121 813	27.09	49 787	26.32	72 026	27.66
Trigonometry	10 200	2.27	4 966	2.63	5 234	2.01
Astronomy	17 170	3.82	6 351	3.36	10 819	4.15
Physics	93 038	20.69	39 493	20.88	53 545	20.56
Chemistry	37 329	8.30	16 450	8.70	20 879	8.02
Physical geography .	112 133	24.94	47 074	24.88	65 059	24.98
Geology	19 646	4.37	7 725	4.08	11 921	4.58
Physiology.....	134 785	29.98	57 392	30.34	77 393	29.72
Psychology	12 325	2.74	4 355	2.30	7 970	3.06
Rhetoric	161 724	35.97	66 949	35.39	94 775	36.39
English literature...	180 156	40.07	74 014	39.12	106 142	40.76
History (other than United States)....	169 478	37.70	69 636	36.81	99 842	38.34
Civics	102 242	22.74	43 997	23.26	58 245	22.37

[1] Per cent to number of graduates.

TABLE III

STUDENTS IN CERTAIN COURSES AND STUDIES IN PRIVATE HIGH SCHOOLS AND ACADEMIES IN 1897–98

COURSES, STUDIES, ETC.	Number students	Per cent to total number secondary students	Male students	Per cent to total number male students	Female students	Per cent to total number female students
Students preparing for college:						
Classical course	16 361	15.54	11 128	21.33	5 233	9.86
Scientific courses	10 332	9.82	7 429	14.23	2 903	5.47
Total preparing for college	26 693	25.36	18 557	35.56	8 136	15.33
Graduating in 1898	12 148	11.54	6 302	12.08	5 846	11.02
College preparatory students in graduating class[1]	5 388	44.35	3 628	57.57	1 760	30.11
Students in						
Latin	50 986	48.45	27 908	53.49	23 078	43.50
Greek	10 973	10.43	8 983	17.21	1 990	3.75
French	24 248	23.04	8 682	16.64	15 566	29.34
German	19 417	18.45	9 719	18.63	9 698	18.28
Algebra	54 397	51.70	29 470	56.49	24 927	46.99
Geometry	25 702	24.43	14 791	28.35	10 911	20.57
Trigonometry	5 519	5.25	3 447	6.61	2 072	3.91
Astronomy	7 263	6.91	2 188	4.19	5 075	9.57
Physics	20 612	19.59	10 230	19.61	10 382	19.57
Chemistry	10 119	9.62	4 991	9.57	5 128	9.67
Physical geography	22 849	21.79	10 555	20.23	12 294	23.17
Geology	6 205	5.90	2 506	4.80	3 699	6.97
Physiology	28 205	26.80	12 561	24.08	15 644	29.49
Psychology	7 873	7.48	2 814	5.39	5 059	9.54
Rhetoric	34 124	32.43	15 164	29.07	18 960	35.74
English literature	35 654	33.88	15 709	30.11	19 945	37.59
History	39 556	37.59	18 346	35.16	21 210	39.98
Civics	16 565	15.74	7 975	15.29	8 590	16.19

[1] Per cent to number of graduates.

TABLE IV[1]

STUDENTS IN CERTAIN COURSES AND STUDIES IN PUBLIC AND PRIVATE HIGH SCHOOLS AND ACADEMIES IN 1897–98

COURSES, STUDIES, ETC.	Number students	Per cent to total number secondary students	Male students	Per cent to total number male students	Female students	Per cent to total number female students
Students preparing for college:						
Classical course	44 296	7.99	24 703	10.24	19 593	6.25
Scientific courses	33 463	6.03	19 485	8.07	13 978	4.46
Total preparing for college	77 759	14.02	44 188	18.31	33 571	10.71
Graduating in 1898	65 170	11.75	25 549	10.59	39 621	12.64
College preparatory students in graduating class[2]	19 940	30.60	10 327	40.42	9 613	24.26
Students in						
Latin	274 293	49.44	115 437	47.83	158 856	50.68
Greek	24 994	4.50	16 639	6.89	8 355	2.67
French	58 165	10.48	20 688	8.57	37 477	11.96
German	78 994	14.24	33 055	13.70	45 939	14.66
Algebra	306 755	55.29	136 146	56.41	170 609	54.43
Geometry	147 515	26.59	64 578	26.76	82 937	26.46
Trigonometry	15 719	2.83	8 413	3.49	7 306	2.33
Astronomy	24 433	4.40	8 539	3.54	15 894	5.07
Physics	113 650	20.48	49 723	20.60	63 927	20.39
Chemistry	47 448	8.55	21 441	8.88	26 007	8.30
Physical geography	134 982	24.33	57 629	23.88	77 353	24.68
Geology	25 851	4.66	10 231	4.24	15 620	4.98
Physiology	162 990	29.38	69 953	28.98	93 037	29.68
Psychology	20 198	3.64	7 169	2.97	13 029	4.16
Rhetoric	195 848	35.30	82 113	34.02	113 735	36.28
English literature	215 810	38.90	89 723	37.18	126 087	40.22
History (other than United States)	209 034	37.68	87 982	36.45	121 052	38.62
Civics	118 807	21.41	51 972	21.53	66 835	21.32

[1] Result of combing tables II and III.

[2] Per cent to number of graduates.

TABLE V

NUMBER AND PER CENT OF STUDENTS PURSUING CERTAIN STUDIES IN PUBLIC AND PRIVATE SECONDARY SCHOOLS, 1890 TO 1898, IN FOUR-YEAR PERIODS.

	1889–90		1893–94		1897–98	
	Number of students	Per cent to total	Number of students	Per cent to total	Number of students	Per cent to total
Total number of secondary students	297 894	.....	407 919	.....	554 814	
Number studying						
Latin	100 144	33.62	177 898	43.59	274 293	49.44
Greek	12 869	4.32	20 353	4.99	24 994	4.50
French	28 032	9.41	42 072	10.31	58 165	10.45
German	34 208	11.48	52 152	12.78	78 994	14.24
Algebra	127 397	42.77	215 023	52.71	306 755	55.29
Geometry	59 789	20.07	103 054	25.25	147 515	26.59
Trigonometry	.....	.....	15 500	3.80	15 719	2.83
Physics	63 644	21.36	97 974	24.02	113 650	20.48
Chemistry	28 665	9.62	42 060	10.31	47 448	8.55

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